

ABSTRACT

The present invention provides a cylindrical slab type gas laser for generating an excellent laser beam having substantially Gaussian intensity distribution of the focussed output laser beam. For this end, a pair of cylindrical electrodes 11, 12 of different diameter are disposed vertically and concentrically. And laser medium is filled in the gap between the two cylindrical electrodes 11, 12 to define a cylindrical straight slab 1. Disposed at one end of the cylindrical top of the cylindrical straight slab 1 is a ring-shaped trick mirror M1 and also disposed at the center of the one end of the cylindrical straight slab 1 is an output mirror M2 to pass a part of the light and to reflect a part of the remaining light. On the other hand, disposed at the other end of the cylindrical straight slab 1 is a w-axicon mirror M3. The above construction eliminates the need for spacers between the two cylindrical electrodes 11, 12 which are required in a conventional gas laser.